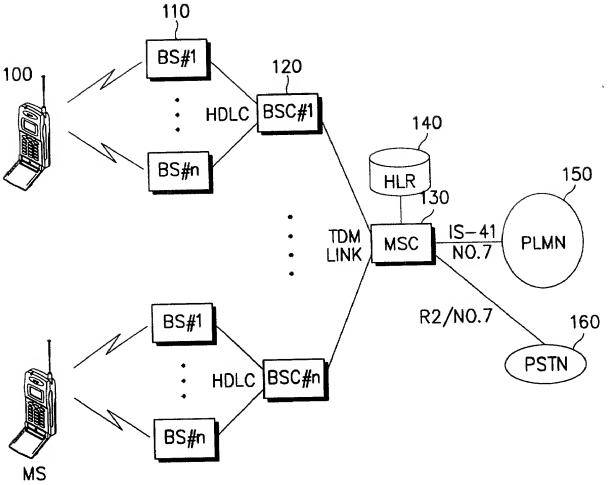
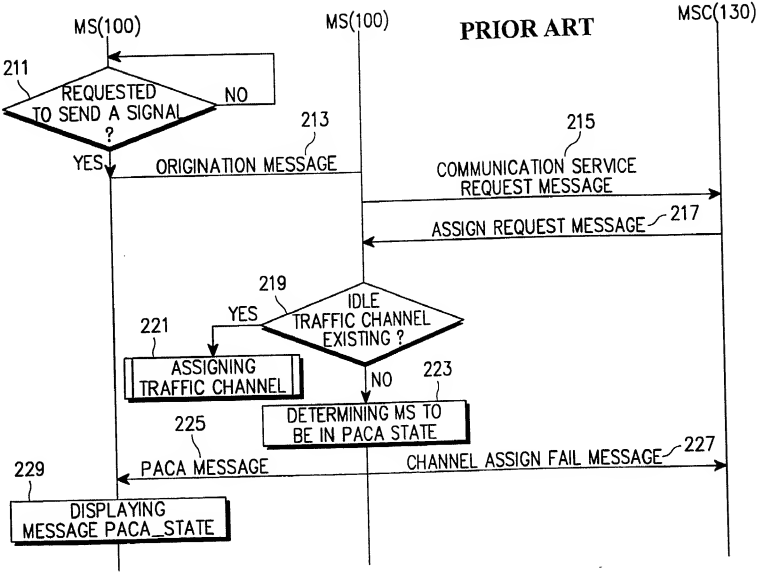

110
BS#1
100
120
HDLC
BSC#1
140
HLR
150
130
BS#n
TDM
LINK
MSC
IS-41
NO.7
PLMN
R2/NO.7
160
PSTN
BS#1
HDLC
BSC#n
BS#n
MS

FIG. 1

FIG. 2


MS(100)
MS(100)
PRIOR ART
MSC(130)
211
REQUESTED TO SEND A SIGNAL ?
NO
YES
213
ORIGINATION MESSAGE
215
COMMUNICATION SERVICE REQUEST MESSAGE
ASSIGN REQUEST MESSAGE
217
219
IDLE TRAFFIC CHANNEL EXISTING ?
YES
221
ASSIGNING TRAFFIC CHANNEL
NO
223
DETERMINING MS TO BE IN PACA STATE
225
PACA MESSAGE
CHANNEL ASSIGN FAIL MESSAGE
227
229
DISPLAYING MESSAGE PACA_STATE

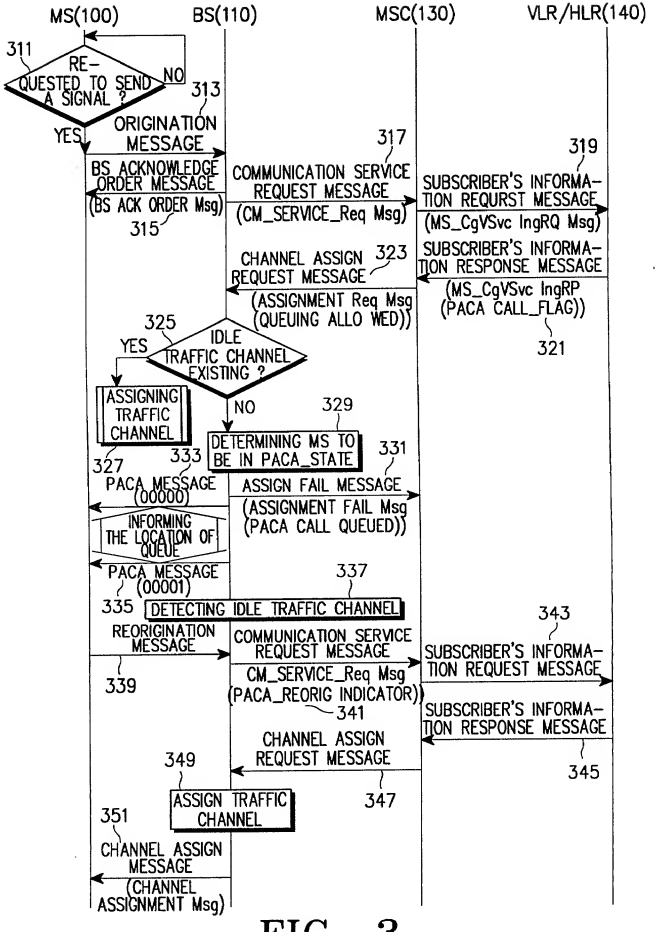

MS(100)
BS(110)
MSC(130)
VLR/HLR(140)
311
RE-QUESTED TO SEND A SIGNAL ?
NO
YES
313
ORIGINATION MESSAGE
317
COMMUNICATION SERVICE REQUEST MESSAGE
(CM_SERVICE_Req Msg)
319
SUBSCRIBER'S INFORMATION REQURST MESSAGE
(MS_CgVSvc IngRQ Msg)
BS ACKNOWLEDGE ORDER MESSAGE
(BS ACK ORDER Msg)
315
SUBSCRIBER'S INFORMATION RESPONSE MESSAGE
(MS_CgVSvc IngRP (PACA CALL_FLAG))
321
CHANNEL ASSIGN REQUEST MESSAGE
323
(ASSIGNMENT Req Msg (QUEUING ALLOWED))
325
IDLE TRAFFIC CHANNEL EXISTING ?
YES
NO
ASSIGNING TRAFFIC CHANNEL
329
DETERMINING MS TO BE IN PACA_STATE
331
327
333
PACA MESSAGE (00000)
ASSIGN FAIL MESSAGE
(ASSIGNMENT FAIL Msg (PACA CALL QUEUED))
INFORMING THE LOCATION OF QUEUE
PACA MESSAGE (00001)
337
335
DETECTING IDLE TRAFFIC CHANNEL
343
REORIGINATION MESSAGE
COMMUNICATION SERVICE REQUEST MESSAGE
SUBSCRIBER'S INFORMATION REQUEST MESSAGE
339
CM_SERVICE_Req Msg (PACA_REORIG INDICATOR)
341
SUBSCRIBER'S INFORMATION RESPONSE MESSAGE
CHANNEL ASSIGN REQUEST MESSAGE
345
349
347
ASSIGN TRAFFIC CHANNEL
351
CHANNEL ASSIGN MESSAGE
(CHANNEL ASSIGNMENT Msg)

FIG. 3

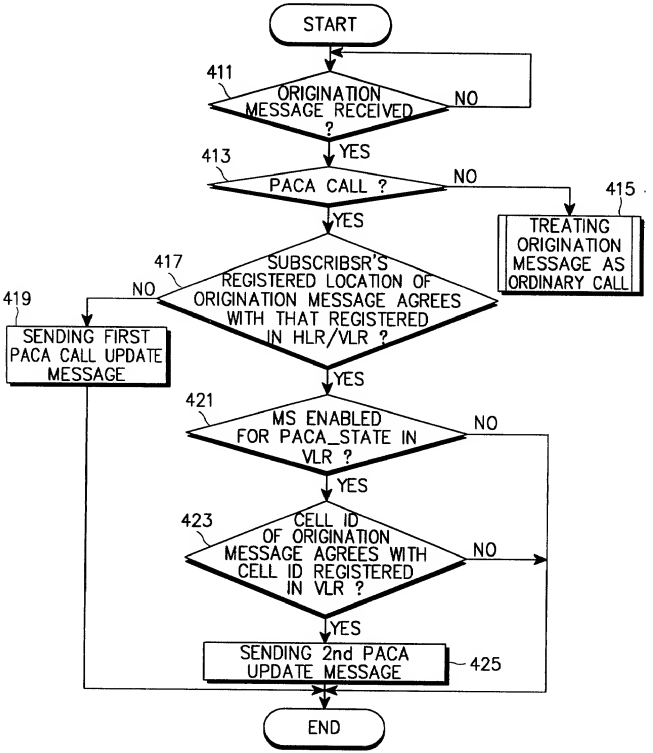

START
411
ORIGINATION MESSAGE RECEIVED ?
NO
YES
413
PACA CALL ?
NO
415
TREATING ORIGINATION MESSAGE AS ORDINARY CALL
YES
417
SUBSCRIBSR'S REGISTERED LOCATION OF ORIGINATION MESSAGE AGREES WITH THAT REGISTERED IN HLR/VLR ?
NO
419
SENDING FIRST PACA CALL UPDATE MESSAGE
YES
421
MS ENABLED FOR PACA_STATE IN VLR ?
NO
YES
423
CELL ID OF ORIGINATION MESSAGE AGREES WITH CELL ID REGISTERED IN VLR ?
NO
YES
SENDING 2nd PACA UPDATE MESSAGE
425
END

FIG. 4

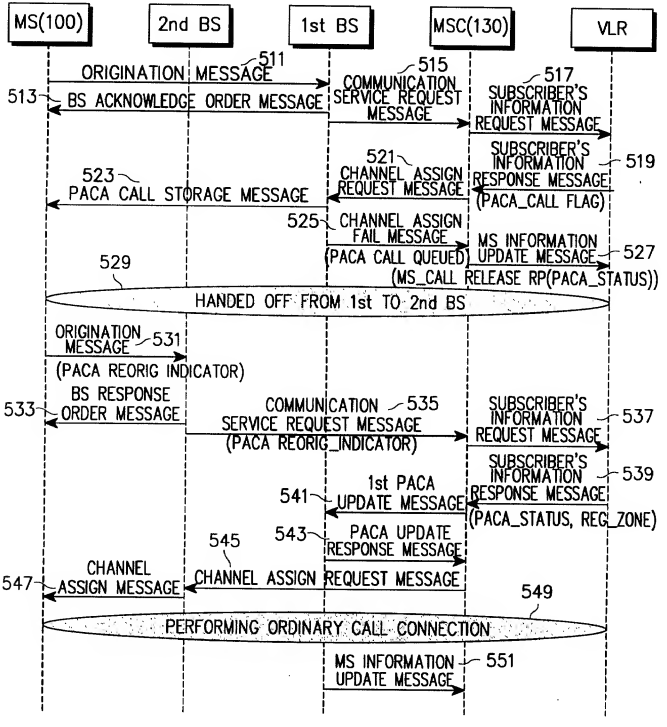

MS(100)
2nd BS
1st BS
MSC(130)
VLR
511
ORIGINATION MESSAGE
515
COMMUNICATION SERVICE REQUEST MESSAGE
517
SUBSCRIBER'S INFORMATION REQUEST MESSAGE
513
BS ACKNOWLEDGE ORDER MESSAGE
519
SUBSCRIBER'S INFORMATION RESPONSE MESSAGE
(PACA_CALL FLAG)
521
CHANNEL ASSIGN REQUEST MESSAGE
523
PACA CALL STORAGE MESSAGE
525
CHANNEL ASSIGN FAIL MESSAGE
(PACA CALL QUEUED)
527
MS INFORMATION UPDATE MESSAGE
(MS_CALL RELEASE RP(PACA_STATUS))
529
HANDED OFF FROM 1st TO 2nd BS
ORIGINATION MESSAGE
531
(PACA REORIG INDICATOR)
533
BS RESPONSE ORDER MESSAGE
535
COMMUNICATION SERVICE REQUEST MESSAGE
(PACA REORIG INDICATOR)
537
SUBSCRIBER'S INFORMATION REQUEST MESSAGE
539
SUBSCRIBER'S INFORMATION RESPONSE MESSAGE
(PACA_STATUS, REG_ZONE)
541
1st PACA UPDATE MESSAGE
543
PACA UPDATE RESPONSE MESSAGE
545
CHANNEL ASSIGN REQUEST MESSAGE
547
CHANNEL ASSIGN MESSAGE
549
PERFORMING ORDINARY CALL CONNECTION
551
MS INFORMATION UPDATE MESSAGE

FIG. 5

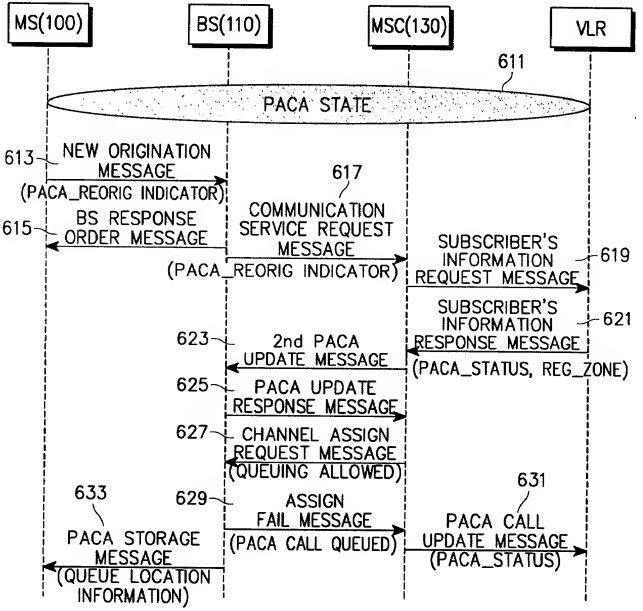

MS(100)
BS(110)
MSC(130)
VLR
611
PACA STATE
613
NEW ORIGINATION MESSAGE
(PACA_REORIG INDICATOR)
617
COMMUNICATION SERVICE REQUEST MESSAGE
(PACA_REORIG INDICATOR)
615
BS RESPONSE ORDER MESSAGE
SUBSCRIBER'S INFORMATION REQUEST MESSAGE
619
SUBSCRIBER'S INFORMATION RESPONSE MESSAGE
621
(PACA_STATUS, REG_ZONE)
623
2nd PACA UPDATE MESSAGE
625
PACA UPDATE RESPONSE MESSAGE
627
CHANNEL ASSIGN REQUEST MESSAGE
(QUEUING ALLOWED)
631
633
629
ASSIGN FAIL MESSAGE
(PACA CALL QUEUED)
PACA CALL UPDATE MESSAGE
(PACA_STATUS)
PACA STORAGE MESSAGE
(QUEUE LOCATION INFORMATION)

FIG. 6

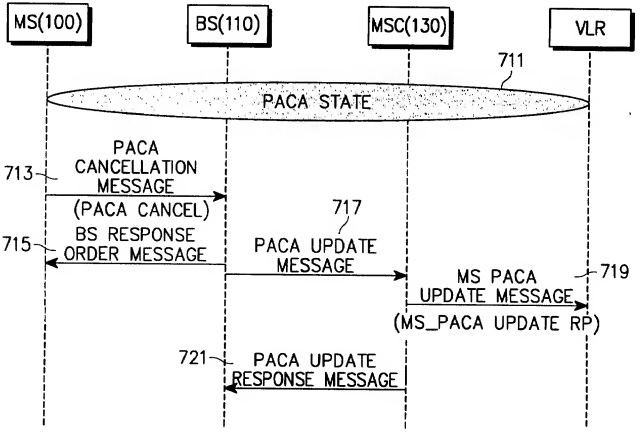

MS(100)
BS(110)
MSC(130)
VLR
711
PACA STATE
713
PACA CANCELLATION MESSAGE
(PACA CANCEL)
715
BS RESPONSE ORDER MESSAGE
717
PACA UPDATE MESSAGE
719
MS PACA UPDATE MESSAGE
(MS_PACA UPDATE RP)
721
PACA UPDATE RESPONSE MESSAGE

FIG. 7

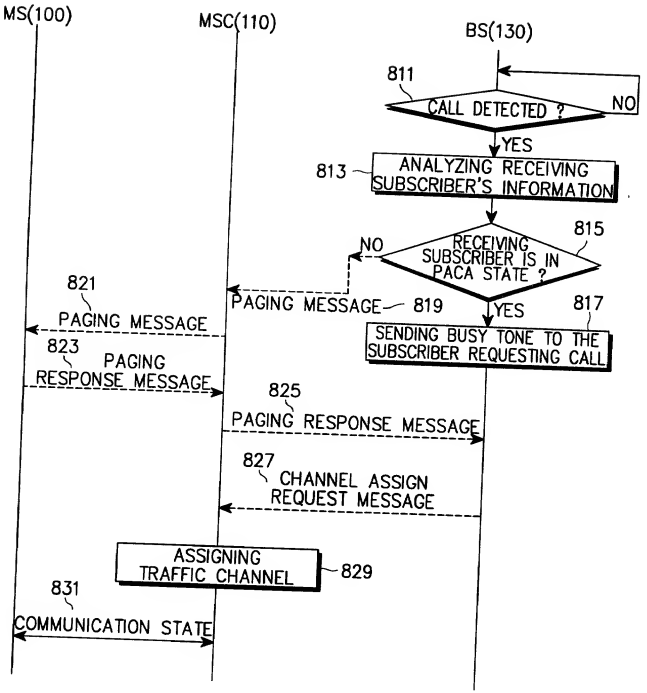

MS(100)
MSC(110)
BS(130)
811
CALL DETECTED ?
NO
YES
813
ANALYZING RECEIVING SUBSCRIBER'S INFORMATION
815
RECEIVING SUBSCRIBER IS IN PACA STATE ?
NO
YES
821
PAGING MESSAGE
PAGING MESSAGE
819
817
SENDING BUSY TONE TO THE SUBSCRIBER REQUESTING CALL
823
PAGING RESPONSE MESSAGE
825
PAGING RESPONSE MESSAGE
827
CHANNEL ASSIGN REQUEST MESSAGE
ASSIGNING TRAFFIC CHANNEL
829
831
COMMUNICATION STATE

FIG. 8